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Qualification Patterns of Olympic and IAAF World Championship Middle Distance Runners



Florentina J. Hettinga & Brian Hanley









Introduction

- Performance climates occur when there is interpersonal competition, an emphasis on winning, and public recognition of demonstrated ability (Pensgaard & Roberts, 2002), which could be expected to occur in world-class competition.
- The competitive nature of sportspeople might mean that many aim to win all their races, regardless of the optimal long-term strategy.
- The aim of this study was to analyse qualification patterns in middle distance running and identify whether the theoretically optimal strategy is overridden by a will to win.
- The performances of 553 athletes were included (800 m: 120 men and 117 women / 1500 m: 175 men and 141 women).

Methods

- The progress of finalists was analysed in each event from 1999 to 2017 through the qualification rounds for finishing position, time and ranking.
- Example: 2015 World Championships – 800 m Men

FINAL

1	David Lekuta RUDISHA	 KEN	1:45.87
2	Adam KSZCZOT	 POL	1:46.08
3	Amel TUKA	 BIH	1:46.35
4	Ferguson Cheruiyot ROTICH	 KEN	1:46.35
5	Pierre-Ambroise BOSSE	 FRA	1:46.63
6	Musaeb Abdulrahman BALLA	 QAT	1:47.01
7	Alfred KIPKETER	 KEN	1:47.66
	Nader BELHANBEL	 MAR	DQ

SEMI-FINAL

1	David Lekuta RUDISHA	 KEN	1:47.88 Q
2	Musaeb Abdulrahman BALLA	 QAT	1:47.93 Q
3	Nijel AMOS	 BOT	1:47.96
4	Konstantin TOLOKONNIKOV	 RUS	1:48.32
5	Abraham Kipchirchir ROTICH	 BRN	1:48.61
6	Ali ALDERAAN	 KSA	1:48.71
7	Antoine GAKEME	 BDI	1:48.86
	Jeffrey RISELEY	 AUS	DNS

HEAT

1	David Lekuta RUDISHA	 KEN	1:48.31 Q
2	Abraham Kipchirchir ROTICH	 BRN	1:48.42 Q
3	Musaeb Abdulrahman BALLA	 QAT	1:48.59 Q
4	Michael RIMMER	 GBR	1:48.70
5	Andreas BUBE	 DEN	1:48.94
6	Artur KUCIAPSKI	 POL	1:49.22
7	Cleiton ABRÃO	 BRA	1:49.79
8	Wais Ibrahim KHAIRANDESH	 AFG	1:59.51

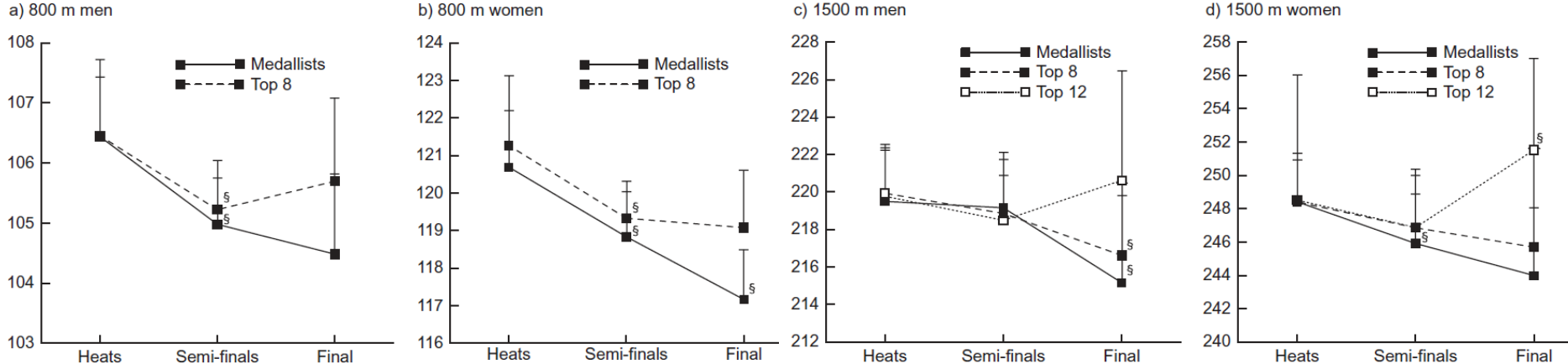
Results

- 40 of the 57 champions won both their heat and semi-final, but only 3 of these were highest-ranked in both.
- 2/3 of champions ran slower than their season's best time in the final.

	Heat and Semi	Heat only	Semi only	Neither
		Men's 800 m		
Champions	10	4	0	1
		Women's 800 m		
Champions	13	2	0	0
		Men's 1500 m		
Champions	12	0	1	2
		Women's 1500 m		
Champions	5	0	4	3

Results

- In the 800m, the eventual medallists improved in successive rounds whereas the other finalists did not.
- In the 1500m, the medallists and other Top 8 finishers were faster than those finishing in positions 9-12 in the final only.



Results

- In each event, there was a correlation (τ_b) between finishing position in the final with finishing position in the heats (all $p < 0.001$) and semi-finals (all $p \leq 0.002$), but not with finishing times.

	Finishing Position		Finishing Time	
	Heats	Semi-final	Heats	Semi-final
Men's 800 m	0.320	0.229	-0.030	0.138
Women's 800 m	0.400	0.484	0.130	0.146
Men's 1500 m	0.367	0.412	0.038	-0.038
Women's 1500 m	0.344	0.444	-0.001	0.115

Discussion

- The performance climate of global athletics championships led to a racing strategy of winning qualification races even though finishing 2nd (or sometimes 3rd) was entirely sufficient.
- Ego orientated behaviours can be beneficial in this way as they help ensure qualification, breed confidence and intimidate opponents.
- An overemphasis on winning can lead to negative actions such as doping and deliberately impeding other athletes.

Rank ↕	Athlete ↕	Nationality ↕	Time ↕	Notes ^[9] ↕
N/A DSQ	Aslı Çakır Alptekin	Turkey	4:40.23	Disqualified
N/A DSQ	Gamze Bulut	Turkey	4:40.40	Disqualified
1	Maryam Yusuf Jamal	Bahrain	4:10.74	
2	Tatyana Tomashova	Russia	4:10.90	
3	Abeba Aregawi	Ethiopia	4:11.03	
4	Shannon Rowbury	United States	4:11.26	
N/A DSQ	Natalia Kareiva	Belarus	4:11.58	Disqualified
5	Lucia Klocová	Slovakia	4:12.64	
N/A DSQ	Yekaterina Kostetskaya	Russia	4:12.90	Disqualified
6	Lisa Dobriskey	Great Britain	4:13.02	
7	Laura Weightman	Great Britain	4:15.60	
8	Hellen Onsando Obiri	Kenya	4:16.57	
N/A	Morgan Uceny	United States	N/A	DNF





After falling on purpose Hamilton feigned injury

Practical implications

- The best athletes were able to adopt both a short-term strategy of winning each round *and* a long-term strategy of conserving energy for the final.
- Champions are racers, not pacers – most did not run their season's best time during the championships; in the most extreme example, the 2016 Olympic 1500 m men's champion ran the final more than 10 s slower than either his heat or semi-final.
- Athletes should practise championship-style racing where there are no pacemakers as in Grand Prix competition, and training for middle distance racing requires practice of different speeds and varied tactics.



Champions are racers, not pacers: an analysis of qualification patterns of Olympic and IAAF World Championship middle distance runners

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ABSTRACT

The aim of this study was to analyse qualification patterns in middle distance running and identify whether athletes adopt theoretically optimal tactics, or whether the will to win overrides these. The performances of 295 men and 258 women finalists in the Olympic and IAAF World Championship 800 m and 1500 m events from 1999 to 2017 were analysed across all three rounds of competition. Finishing position, time and ranking amongst all competitors were found for each athlete. Position in the final was correlated with finishing position in the heats and semi-finals (all $P < 0.001$), but not with finishing times in those rounds. Of the 57 champions, 40 won both their heat and semi-final, even though a lower automatic qualification position would have been sufficient, and only 18 achieved a season's best time in the final. The will to win amongst the eventual champions (and other medallists) suggests predominantly ego oriented behaviour that is encouraged by a performance climate, and which did not appear to differ between men and women. Coaches and athletes are recommended to note that championship-specific physiological and psychological factors are important to develop in training and prior competition to improve both short- and long-term championship strategies.

ARTICLE HISTORY

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KEYWORDS

Elite-standard athletes;
fatigue; goal orientation;
race tactics; track and field

Thank you for your attention!



Do you have any questions?

References

- Hanley, B. & Hettinga, F. J. (2018). Champions are racers, not pacers: an analysis of the qualification patterns of Olympic and IAAF World Championship middle distance runners. *Journal of Sports Sciences*, doi: 10.1080/02640414.2018.1472200
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